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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,365	11/03/2003	Murali Krishna Punaganti Venkata	NOKM.065PA	5959
<div>7590 09/07/2007 Hollingsworth &amp; Funk, LLC 8009 34th Avenue South, Suite 125 Minneapolis, MN 55425</div>			<div>EXAMINER LIU, LIN</div>	
			<div>ART UNIT 2145</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 09/07/2007</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/700,365	Applicant(s) PUNAGANTI VENKATA ET AL.	
	Examiner Lin Liu	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/14/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This office action is responsive to communications filed on 11/03/2003.

Claims 1-24 are pending and have been examined.

2. The information disclosure statement (I.D.S) filed on 05/14/2004 is considered.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "a uniform format" in claim 1 is a relative term, which renders the claim indefinite. The term "a uniform format" is unclear and vague as what applicant refers it as.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. **Claims 8-14** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

7. With regard to **claim 8**, the instant claim is directed towards a service discovery system with two service discovery agents, wherein these service discovery agents could

be implemented in software alone. Claim directed towards software alone is per se nonstatutory. Claims 9-14 are rejected under the same rationale as of claim 8.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims **15-18** are rejected under 35 U.S.C 102 (e) as being anticipated by **Tsai et al. (publication no.: US 2005/0078644 A1)**.

With respect to **claim 15**, Tsai teaches a network host, comprising:

means for receiving service discovery queries from a service discovery agent  
(Tsai, fig. 1, page 2, paragraph 11);

means for discovering services within a domain of the network host in response to the service discovery queries (Tsai, page 1, paragraph 10, and page 2, paragraph 11);

means for providing the services discovered within the domain of the network host to the service discovery agent; and means for accessing services within a domain of the service discovery agent (Tsai, page 2, paragraph 13).

With respect to **claim 16**, Tsai teaches the network host according to claim 15, further comprising means for providing access to the services within the domain of the service discovery agent to network entities within the domain of the network host (Tsai, page 2, paragraph 13).

In regard to **claims 17-18** the limitations of these claims are substantially the same as those in claims 15-16, but rather in computer instruction form. Therefore the same rationale for rejecting claims 15-16 is used to reject claims 17-18. By this rationale **claims 17-18** are rejected.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1-14, and 19-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsai et al. (publication no.: US 2005/0078644 A1)** in view of **Monroe (patent no.: US 6,130,917)**.

With respect to **claim 1**, Tsai teaches a method for providing uniform service discovery through the use of a plurality of service discovery protocols, comprising:

generating service discovery queries from a user interface (Tsai, page 2, paragraph 11, noted that the wireless client 22 generates request);

receiving results indicative of services found from each of the plurality of service discovery protocols (Tsai, page 1, paragraphs 9-10, noted that the wireless protocols could be Bluetooth, UPnP, or SLP) in response to the service discovery queries (Tsai, page 2; paragraphs 11 and 13, noted that the wireless access point 12 receives service information from service discovery server 14); and

translating the results into a uniform format for display on the user interface, wherein the uniform format is independent of the plurality of service discovery protocols (Tsai, page 2, paragraph 12 and page 4, paragraph 24, noted that the service information is changed into a format that can be read and displayed by wireless client device 22).

However, Tsai does not explicitly teach a method of translating the service discovery queries into formats required by a plurality of service discovery protocols.

In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, col.2, lines 44-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of translating the service discovery queries into formats required by a plurality of service discovery protocols as taught by Monroe in Tsai's to permit real time transmission regardless of data format and permits

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transmission of source data to a variety of stations using protocols of either transmitting/receiving stations (Monroe, col. 2, Summary Of the Invention).

With respect to **claim 2**, Tsai teaches the service discovery engine (Tsai, fig. 1, Wireless Access Point 12). However, Tsai does not explicitly teach a method of translating the service discovery queries into a format required by a service discovery engine.

In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, col.2, lines 44-63).

With respect to **claim 3**, Tsai teaches the method according to claim 2, wherein the service discovery engine compiles service discovery results in response to the service discovery queries and provides the service discovery results to the user interface (Tsai, page 2, paragraph 24, noted that the service information is displayed to the wireless client device 22).

With respect to **claim 4**, Tsai teaches the method according to claim 3, wherein the service discovery engine gains access to the plurality of services found (Tsai, page 2, paragraph 12).

With respect to **claim 5**, Tsai teaches the method according to claim 4, wherein the service discovery engine provides access to the plurality of services found to a plurality of network entities within a domain of the service discovery engine (Tsai, page 2, paragraph 13 and page 4 paragraph 24, noted that service information is transmitted to multiple wireless client devices within a coverage area).

With respect to **claim 6**, Tsai teaches the method according to claim 1, wherein the plurality of service discovery protocols includes Bluetooth service discovery protocol (Tsai, page 1, paragraphs 9, noted that the wireless protocols could be Bluetooth).

With respect to **claim 7**, Tsai teaches the method according to claim 1, wherein the plurality of service discovery protocols includes one or more of Service Location Protocol (SLP), Salutation, Jini, Bluetooth, and Universal Plug and Play (UPnP) (Tsai, page 1, paragraphs 9-10, noted that the wireless protocols could be Bluetooth, UPnP, or SLP).

With respect to **claim 8**, Tsai teaches a service discovery system, comprising:  
a first service discovery agent coupled to receive service discovery queries in a user format (Tsai, fig. 1 and page 2, paragraph 11, noted that wireless access point 12 receives request from wireless client device 22); and

a second service discovery agent (Tsai, fig. 1, service discovery server 14) coupled to receive service discovery queries from the first service discovery agent and in response, to provide service discovery responses to the first service discovery agent (Tsai, page 2, paragraphs 11-12, noted that service discovery server 14 delivers information relating to discovered services to the wireless access point 12), wherein the second service discovery agent is coupled to access services discovered by the first service discovery agent (Tsai, fig. 1, page 2, paragraphs 11-12).

However, Tsai does not explicitly teach a method of translating the service discovery queries into formats required by a plurality of service discovery protocols.



In the same field of Monroe teaches a method of translating the service discovery queries into formats required by a plurality of service discovery protocols (Monroe, col.2, lines 44-63).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of translating the service discovery queries into formats required by a plurality of service discovery protocols as taught by Monroe in Tsai's to permit real time transmission regardless of data format and permits transmission of source data to a variety of stations using protocols of either transmitting/receiving stations (Monroe, col. 2, Summary Of the Invention).

With respect to **claim 9**, Tsai teaches the service discovery system according to claim 8, wherein the first service discovery agent comprises a service configuration tool coupled to allow first discovery agent operation independent of second service discovery agent operation (Tsai, fig. 2 and page 2 paragraph 15).

In regard to **claim 10** the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 10. By this rationale **claim 10** is rejected.

With respect to **claim 11**, Tsai teaches the service discovery system according to claim 10, wherein the canonical query transform is configured with a programmable number of format capabilities (Tsai, fig. 2 and page 2 paragraph 16).

With respect to **claim 12**, Tsai teaches the service discovery system according to claim 11, wherein the programmable number of format capabilities is dependent upon a

number of plug in modules installed within the canonical query transform (Tsai, fig. 2 and page 2 paragraph 16).

In regard to **claim 13** the limitations of this claim are substantially the same as those in claim 6. Therefore the same rationale for rejecting claim 6 is used to reject claim 13. By this rationale **claim 13** is rejected.

In regard to **claim 14** the limitations of this claim are substantially the same as those in claim 7. Therefore the same rationale for rejecting claim 7 is used to reject claim 14. By this rationale **claim 14** is rejected.

In regard to **claim 19** the limitations of this claim are substantially the same as those in claim 8. Therefore the same rationale for rejecting claim 8 is used to reject claim 19. By this rationale **claim 19** is rejected.

In regard to **claim 20** the limitations of this claim are substantially the same as those in claim 9. Therefore the same rationale for rejecting claim 9 is used to reject claim 20. By this rationale **claim 20** is rejected.

In regard to **claim 21** the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 21. By this rationale **claim 21** is rejected.

In regard to **claim 22** the limitations of this claim are substantially the same as those in claim 11. Therefore the same rationale for rejecting claim 11 is used to reject claim 22. By this rationale **claim 22** is rejected.

In regard to **claim 23** the limitations of this claim are substantially the same as those in claim 1, but rather in a computer instruction form. Therefore the same rationale for rejecting claim 1 is used to reject claim 23. By this rationale **claim 23** is rejected.

With respect to **claim 24**, Tsai teaches the computer-readable medium according to claim 23, further comprising instructions to perform steps comprising:

providing the service discovery queries to a network host (Tsai, fig. 1, page 2, paragraph 12); and

receiving responses from the network host in response to the provided service discovery queries (Tsai, fig. 1, page 2 paragraphs 11-12).

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Kakivaya et al. (publication no.: US 2004/0267876 A1) discloses an ad-hoc service discovery protocol.
- Graham et al. (patent no.: US 6,594,700 B1) discloses a method for implementing a universal service broker interchange mechanism.
- Stephens et al. (patent no.: US 7,170,857 B2) discloses a virtual linking using a wireless device.
- Mastrianni (publication no.: US 2002/0099814 A1) discloses a method for providing automatic discovery of network protocols configuration and resources.

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- Arnold et al. (patent no.: 6,167,449) discloses a method for identifying and locating services on multiple heterogeneous networks using a query by type.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447.

The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L.Liu  
08/31/2007

  
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